

REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The Office Action dated May 2, 2006, has been received and its contents carefully reviewed.

Claims 1-20 are rejected to by the Examiner. Claims 1-20 remain pending in this application.

In the Office Action, claims 1-3, 4, 5, 11, 15 and 16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,496,172 to Hirakata (hereinafter "Hirakata '172") taken with U.S. Patent No. 5,847,687 to Hirakata et al. (hereinafter "Hirakata '687"). Claims 6 and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hirakata '172 taken with Hirakata '687 and in view of U.S. Patent No. 5,739,804 to Okumura (hereinafter "Okumura"). Claims 10 and 12-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hirakata '172 taken with Hirakata '687 and in view of U.S. Patent No. 6,271,816 to Jeong et al. (hereinafter "Jeong").

The rejection of claims 1-5, 11, and 15-16 is respectfully traversed and reconsideration is requested. Claims 1-4 are allowable over the cited references in that each of these claims recites a combination of elements including, for example, "allowing pixels outside the at least one pixel block to respond to data signals having a polarity contrary to pixels adjacently arranged at left and right sides thereof." Claim 5 is allowable over the cited references in that this claim recites a combination of elements including, for example, "second signal supplying means for applying data signals to pixels outside the at least one pixel block, wherein the applied data signals have a polarity contrary to data signals applied to pixels adjacently arranged at left and right sides thereof and also arranged outside the at least one pixel block." Claims 11 and 15 are allowable over the cited references in that each of these claims recites a combination of elements including, for example, "applying video signals to at least one second plurality of consecutively arranged data lines such that video signals having opposite polarities are applied to pixels adjacent each other along a gate line direction, wherein data lines within the at least one second plurality of consecutively arranged data lines are not included within the at least one first plurality of consecutively arranged data lines." Claim 16 is allowable over the cited references in that this

claim recites a combination of elements including, for example, “second signal supplying means for applying video signals to at least one second plurality of consecutively arranged data lines such that video signals having opposite polarities are applied to pixels adjacent each other along a gate line direction, wherein data lines within the at least one second plurality of consecutively arranged data lines are not included within the at least one first plurality of consecutively arranged data lines.” HIRAKATA ‘172 and HIRAKATA ‘687, singly or in combination, do not teach or suggest at least these features of the claimed invention.

In the present invention there is a first block of at least two columns in which adjacent pixels along the rows of the block have the same polarity. Outside of this block of columns, each pixel has a polarity opposite to each adjacent pixel along its row, that is, the polarity alternates along the row for these columns. This is not the case in HIRAKATA ‘172 as admitted by the Examiner. The Examiner then cites HIRAKATA ‘687 to cure this deficiency. While HIRAKATA ‘687 teaches “data signals having a polarity contrary to pixels adjacently arranged at left and right sides thereof” so does the related art described in Applicant’s Figs. 3A and 3B. HIRAKATA ‘687 does not contemplate “data signals having a polarity contrary to pixels adjacently arranged at left and right sides thereof” in combination with the one crystal block. The Examiner suggests that one of ordinary skill in the art would combine HIRAKATA ‘687 with HIRAKATA ‘172 “in order to reduce the operating voltage of the display device.” HIRAKATA ‘172 is directed to an IPS mode display where the voltage applied to the common electrode is inverted between a high and low level in order to reduce the voltage variation required in the data signals to use inversion driving of the liquid crystal. Such a voltage could be applied to the common electrode in HIRAKATA ‘687 without changing the pattern in which the data voltages applied to the pixels is applied. Hence, the Examiner’s motivation to combine HIRAKATA ‘687 and HIRAKATA ‘172 would not result in the invention as claimed. The only way that HIRAKATA ‘687 and HIRAKATA ‘172 could be combined to achieve the present intention is to impermissibly use hindsight reconstruction. Accordingly, claims 1-5 and 11, and 15-16 are allowable over HIRAKATA ‘687 and HIRAKATA ‘172.

Further claims 6, 10, 12, 13, 14, and 17 are allowable over HIRAKATA ‘687 and HIRAKATA ‘172 for the same reasons as discussed above with respect to claims 1-5, 11, and 15-16. Neither

Okumura or Jeong cure the defects of Hirakata, so claims 6, 10, 12, 13, 14, and 17 are allowable as well.


Applicants believe the foregoing remarks place the application in condition for allowance and early, favorable action is respectfully solicited.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at (202) 496-7500 to discuss the steps necessary for placing the application in condition for allowance. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. § 1.136, and any additional fees required under 37 C.F.R. § 1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911. *A duplicate copy of this sheet is enclosed.*

Respectfully submitted,

Dated: August 2, 2006

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